

AUG 31, 1979

GENERAL SERVICES ADMINISTRATION  
WASHINGTON, DC 20405

Executive Registry  
79-4833



79-2971

MEMORANDUM FOR THE HEADS OF DEPARTMENTS AND AGENCIES

SUBJECT: Use of Portable Fans

There has been considerable controversy over the use of portable fans within space controlled by the General Services Administration since the issuance of the Department of Energy's Standby Conservation Plan No. 2, Emergency Building Temperature Restrictions.

I have reviewed the situation and decided to limit the use of portable fans to those areas where the temperature levels prescribed by the President (78 degrees) cannot be attained with our central ventilation systems. This decision is necessary to assist us in achieving energy goals established by the President. The slight increase in personal comfort achieved with portable fans is not justified by the energy requirements when the prescribed 78 degree temperature already exists. It should be noted that Federal buildings of the Executive Branch have maintained summer temperatures in the 78-80 degree range since 1974.

I need your support in informing employees of your department of this decision. I have enclosed the point paper which led to this decision for your information and assistance in explaining the policy.

R. S. FREEMAN III  
Administrator

Enclosure

VERNIE:

PLEASE USE THIS IN YOUR  
UPCOMING DISCUSSIONS

WITH [REDACTED]

FOR THE [REDACTED] NOTICE

FYI

Tow 9/25 4

TOW

NOTE ABOVE,

INTER THAT PADS HAS THE ACTION ON PREPARING  
THE HEADQUARTERS NOTICE REFERRED TO ABOVE.

PLEASE DISCUSS WITH [REDACTED] TO ENSURE

THERE IS NO [REDACTED] RESULTS OF YOUR DISCUSSIONS. Tow 9/20/79

REC'D

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PE

FILE

19 SEP 1979

OL 9 3864

Office of Buildings Management  
Public Buildings Service  
July 25, 1979

POINT PAPER

DECISION  
NEEDED

: Policy on Use of Portable Fans in GSA Buildings

BACKGROUND

: GSA discontinued the use of portable fans in GSA operated buildings years ago when buildings generally were provided with integrated heating, ventilating and air-conditioning (HVAC) systems. With adequate cooling and controlled, filtered ventilation, it was felt that there was no need for fans. The use of fans in large private-sector buildings diminished greatly about the same time. Current GSA policy on fans (from Federal Property Management Regulations, 101-20.116.3) is as follows: "The operation of threshold heaters, portable space heaters, and portable electric fans in Government-owned or -leased space is prohibited."

RECENT DOE  
ACTIONS

: The draft "Standby Conservation Plan No. 2, Emergency Building Temperature Restrictions," published June 1, 1979 in the Federal Register by the Department of Energy (DOE), for consideration at public hearings and for comment, permitted the use of free-standing fans within rooms. GSA strongly recommended that the statement on fans "be restructured to be quite restrictive -- limiting fan use to valid needs." However, the final version of Standby Plan No. 2 includes no limitations on the use of fans, both central and portable type. In fact, fan use is encouraged to circulate air for more comfort. This can be, and is, accomplished by the central fan system. Standby Plan No. 2 is now in effect for both public and private sector buildings, since President Carter recently proclaimed an energy supply emergency.

EMPLOYEE AND  
MEDIA ACTIONS

: Employees, and employee groups and the media have shown great interest in the use of portable fans. The use of portable fans is being seen by many as an "employee right," based on the provision of Standby Plan No. 2.

ADVANTAGES OF  
PORTABLE FANS

- : (1) The circulation of air by a portable fan provides improved comfort for most individuals subjected to higher ambient temperature (say above 78 degrees F).
- (2) Employees hear and see fan operation and most react favorably.

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DISADVANTAGES OF  
PORTABLE FANS :

\*(1) The purchase of a great number of portable fans for GSA buildings would be costly -- in the order of \$6 million if installed in only 20 percent of the space.

(2) The use of portable fans will not lower the temperature level in the space where they are operated. In fact, the heat from the motor adds to the heat load on the air-conditioning system.

(3) The general use of portable fans would introduce safety and fire hazards. Fan cords are a tripping hazard. Fans knocked or tipped over create an injury hazard. Frayed fans create a fire hazard.

(4) Unless left in place year around (and possibly a large number of fans operated year around), the collection and storage of fans in the fall and the return of fans in the spring would be a costly operation.

(5) Ceiling type fans, if used instead of portable fans, would be very expensive to install on the usual suspended ceiling. Also, ceiling fans could prove quite hazardous in areas with the normal 8-9 foot ceiling height. (One manufacturer placed a full page ad in the Washington Post recently urging the installation of ceiling fans in all Federal buildings.)

\*(6) The general usage of portable fans in GSA controlled space would increase the energy use for HVAC by approximately 6 to 9 percent. This increased energy usage results from the electrical energy to operate the fans plus the extra cooling load to offset the heat added to the space by the fan motors. This estimate is based on the knowledge that the building HVAC system would still have to be operated during the cooling season in almost all buildings. This increase in energy use should be avoided if at all possible since GSA, and other Federal agencies, were recently directed by the President to reduce overall energy use by 5 percent for the period April 1, 1979 through March 31, 1980.

\*Backup information on cost of fans and the energy cost to operate fans is attached.

GENERAL  
COMMENTS

: (1) Any decision not to permit the general use of portable fans will undoubtedly bring on a great outcry from employees and the media.

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(2) An informal telephone conversation with Mr. Henry Bartholomew (primary author of Standby Plan No. 2 we understand) of DOE on July 23, 1979, resulted in his off-hand agreement that it seemed sensible to limit fan use to problem areas in buildings, only.

(3) Under our energy conservation program in existence since 1973, GSA has operated buildings in the 78-80 degree F range during the cooling season without the need for portable fans.

(4) Open windows, or open windows with fan operating in the room, will not permit the non-operation of the HVAC during the peak cooling months in GSA buildings generally. Open windows are helpful only for a short period in the spring and fall and then only to those employees having offices on the perimeter of the building. Open windows are always an overall disadvantage in large block type buildings with large interior office areas.

ALTERNATE  
DECISIONS

: (1) Adopt a policy of providing (or permitting) portable electric fans in GSA controlled buildings generally.

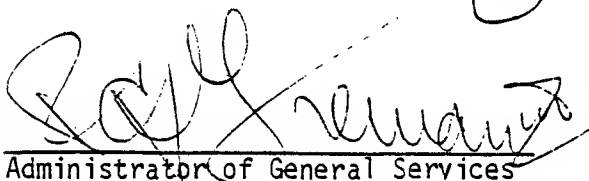
(2) Adopt a policy of providing (or permitting) portable fans only at specific locations in specific buildings where there is a problem situation and the proper temperature level cannot be provided during the cooling season. Example, the west corner of a building having large windows and an inadequate HVAC system. Approval to use fans would be granted only on a case-by-case basis after full justification, only in locations where it was not possible to provide the proper temperature with the existing HVAC system.

(3) Prohibit the use of portable electric fans in GSA owned or leased space, thus continuing the present GSA policy.

(The merits and disadvantages of these three alternates are covered in the preceding portions of Decision Paper.)

RECOMMENDATION: It is recommended that Alternate Decision 2 be adopted.

ACTION : Alternate (1) (2) (3) is adopted.

  
Administrator of General Services

7/27/79  
Date

SPECIAL REPORT

5623  
DATE 6/25/79  
DF 6/26/79  
June 22, 1979  
B 7/3  
PBAL/H

TO: ADMINISTRATOR - A

SUBJECT: Three Suspicious Fires

BUILDING Regional Office BuildingLOCATION 7th & D Streets, S.W., Washington, DC

NET SQ. FT. \_\_\_\_\_ NO. OF OCCUPANTS \_\_\_\_\_

GOV'T OWNED \_\_\_\_\_ x \_\_\_\_\_ LEASED \_\_\_\_\_ JURISDICTION \_\_\_\_\_

MESSAGE: During the night of June 21, and early morning of June 22, 1979, three suspicious fires occurred in the subject building.

At approximately 2100 hours on June 21, an investigation of smoke in the 3500 corridor determined a fan in Room 3523, occupied by HEW, had apparently been left running. This fan was in bad repair with the power cord having several breaks in its insulation. A coffee pot and another fan were also found left on. The only damage was that to the fan. The office occupants were questioned regarding the normal routine as it concerned the fan. They stated that all appliances were turned off at the end of each work day.

At 0029 hours on June 22, a waterflow alarm was received at the Regional Control Center. The investigating FPO found smoke and water coming from Room 2319, occupied by 3PC. Sprinklers had controled a fire involving a table top with papers placed on it. There was a coffee maker near the table, but it was not damaged by fire and therefore, most likely not the cause of the fire. Damage from the fire was limited to the table and papers, plus two movable partitions. This fire has been determined to be arson.

A short while later, at 0225 hours a report of smoke on the fifth floor was received. A trash can was found burning under a desk in Room 5707, occupied by HEW. Reports by office occupants revealed that someone had moved the trash can from across the room and placed it under the desk. Papers, apparently from on top of the desk, were placed in the trash can and set afire. This fire, too, has been labeled as arson. Damage was only to the trash can and the unidentified documents it contained.

COMMISSIONER, PBS

RECEIVED FROM: Mike Thompson - WPOA

RECEIVED BY: Donald Bathurst - PBAD

TIME: 9:00 a.m., 6/22/79

CONTACT: DIRECTOR, ACCIDENT AND FIRE PREVENTION DIVISION, 566-1464

\_\_\_\_\_ PB

No official estimates have been issued on these fires, and the exact causes are still under investigation. The Federal Bureau of Investigation has been called to assist on the two fires that have been determined to be arson by GSA and the D.C. Fire Department.

### BACKUP INFORMATION

#### INITIAL COST AND OPERATING COST FOR FANS IN GSA BUILDINGS

The impact of adding fans to Federal buildings will be increased energy use - not a reduction. The portable fans are operated in addition to the building ventilating and air-conditioning system, not in lieu of the building ventilating and air-conditioning system. The Standby Conservation Plan No. 2 encourages the use of fans, central or portable, to circulate air.

#### INITIAL COST

There are five fans listed in the Federal Supply Catalog. They range from 30" pedestal fans to small hassock fans and include the standard 12" and 16" desk fans which can be mounted on the wall.

The average cost per fan is \$48. We estimate the cost of portable fans, if used throughout the building, would be \$120 per 1,000 square feet of occupant space.

For example, if portable fans were permitted in the GSA building in all the occupied areas the purchase cost of the fans would be \$58,000. The increased energy use would be approximately 7,500 BTU's per square feet annually.

#### ENERGY CONSUMPTION

If additional fans are added throughout a building, the direct increased electrical connected load for the fans would be .3 watts per square foot or 1,000 watts for each 3,300 square feet of space. (Based on fan having 1/6 horsepower motor serving an area of 400 square feet.)

The additional cooling load added to the space by the portable fan motor would be approximately .3 watts per square foot or approximately 1 BTU/SF. The Federal buildings have been designed for a load of approximately 30 BTU's per square foot. The 1 BTU per square foot added for portable fans then would be an increase in heat load of approximately 3.0 percent of the design load.

Since our buildings have reduced lighting and ventilating for energy conservation, the systems never operate at the original maximum design of 30 BTU's per square feet. Therefore, the actual increased electrical energy use for the portable fans for approximately four to six months each year would be between 6.0 percent and 9.0 percent depending on the number of portable fans in the building.

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SUMMARY INFORMATION

GSA controlled total occupiable space is 252,143,586 square feet. If fans were purchased for 20 percent of this space the cost would be \$6,051,360. The additional cost for electricity to operate the fans and the additional cooling load imposed on the building from the heat rejected from the fan motors based on 1,000 hours of operation per year would be approximately \$403,200. The extensive use of portable fans in GSA buildings will have a significant adverse impact on the Energy Conservation Program, making it even more difficult to meet the President's energy conservation goals.

PBE:R. E. SIMMERS

566-1735

7/25/79



STATINTL

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